

# PS-LX230/LX230C/LX231

## SERVICE MANUAL

PS-LX230:

*US Model*

PS-LX230C:

*US Model*

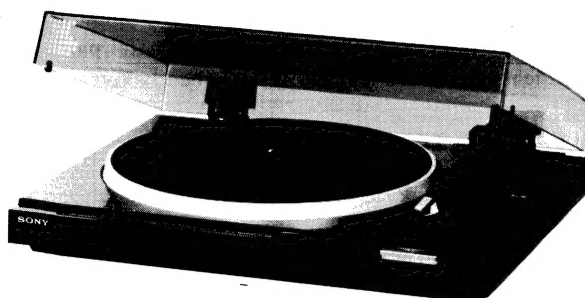
*Canadian Model*

PS-LX231:

*AEP Model*

*UK Model*

*E Model*



PS-LX230C



PS-LX231

VL-45G cartridge is supplied with PS-LX230C, while VL-42G cartridge is supplied with PS-LX231. Cartridge is not supplied with PS-LX-230.

### SPECIFICATIONS

#### Turntable

Platter	30.0 cm (12 in.), aluminum-alloy diecast
Motor	DC servo motor
Drive system	Belt drive
Control system	DC servo control system
Speed	33 $\frac{1}{3}$ rpm, 45 rpm
Starting characteristics	Comes to nominal speed within $\frac{1}{2}$ rotation (33 $\frac{1}{3}$ rpm)
Wow and flutter	0.045% (WRMS), $\pm 0.06\%$ (DIN)
Signal-to-noise ratio	70 dB (DIN-B)
Automatic system	Return, reject
Suspension system	High elasticity gel insulator

#### Tonearm


Type	PS-LX230/230C: Statically balanced PS-LX231: Dynamically balanced
Pivot-to stylus length	216.5 mm (8 $\frac{1}{2}$ in.)

#### Cartridge


PS-LX230:	Not supplied
PS-LX230C:	VL-45G
Type	Moving magnet type
Frequency response	20Hz to 20 kHz
Channel separation	20 dB at 1 kHz
Output voltage	3.5 mV at 1 kHz, 5 cm/sec., 45°
Load impedance	50 to 100 kilohms
Tracking force	1.25 g
Stylus	Sony ND-145G (conical 0.6 mil diamond)
Weight	6 g

— Continued on page 2 —

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

STEREO TURNTABLE SYSTEM  
**SONY**®



# PS-LX230/LX230C/LX231

PS-LX231: VL-42G

Type Moving magnet type

Frequency response  
20 Hz to 20 kHz

Channel separation

16 dB at 1 kHz

Output voltage 2.5 mV at 1 kHz, 5 cm/sec.

Load impedance 50 to 100 kilohms

Tracking force 2 g

Stylus Sony ND-142G

(conical 0.6 mil diamond)

Weight 8 g

## General

### Power requirements

US, Canadian model: 120 Vac, 60 Hz

AEP model: 220 Vac, 50/60 Hz (240 Vac adjustable  
by authorized Sony personnel)

UK model: 240 Vac, 50/60 Hz (220 Vac adjustable  
by authorized Sony personnel)

E model: 110–120 or 220–240 V ac adjustable,  
50/60 Hz

### Power consumption

5W

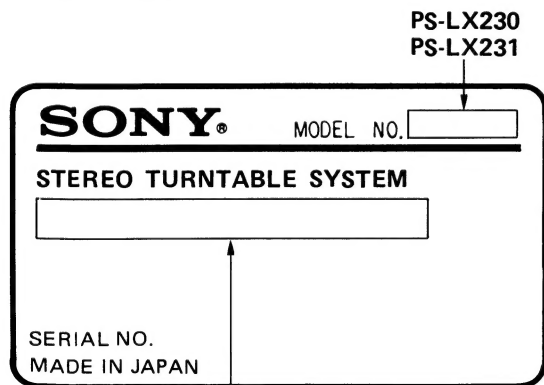
Dimensions Approx. 430 × 110 × 360 mm (w/h/d)  
(17 × 4<sup>3</sup>/<sub>8</sub> × 14 in.)

including projecting parts and controls

Weight Approx. 3.5 kg (7 lbs 12 oz), net

## MODEL IDENTIFICATION

— Specification Label —



US, Canadian model: AC: 120V60Hz 5W

AEP model: AC: 220V~50/60Hz 5W

UK model: AC: 240V~50/60Hz 5W

E model: AC: 110–120V, 220–240V~  
50/60Hz 5W

## SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

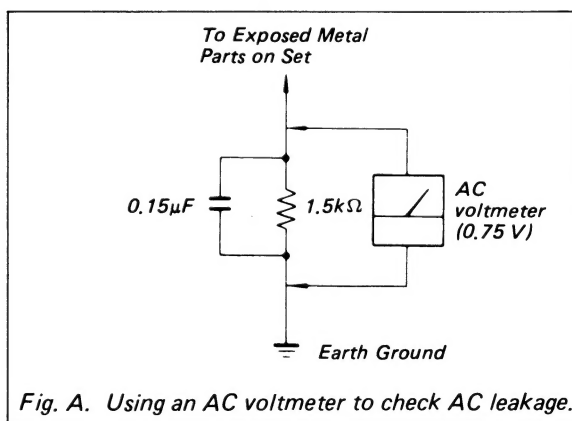
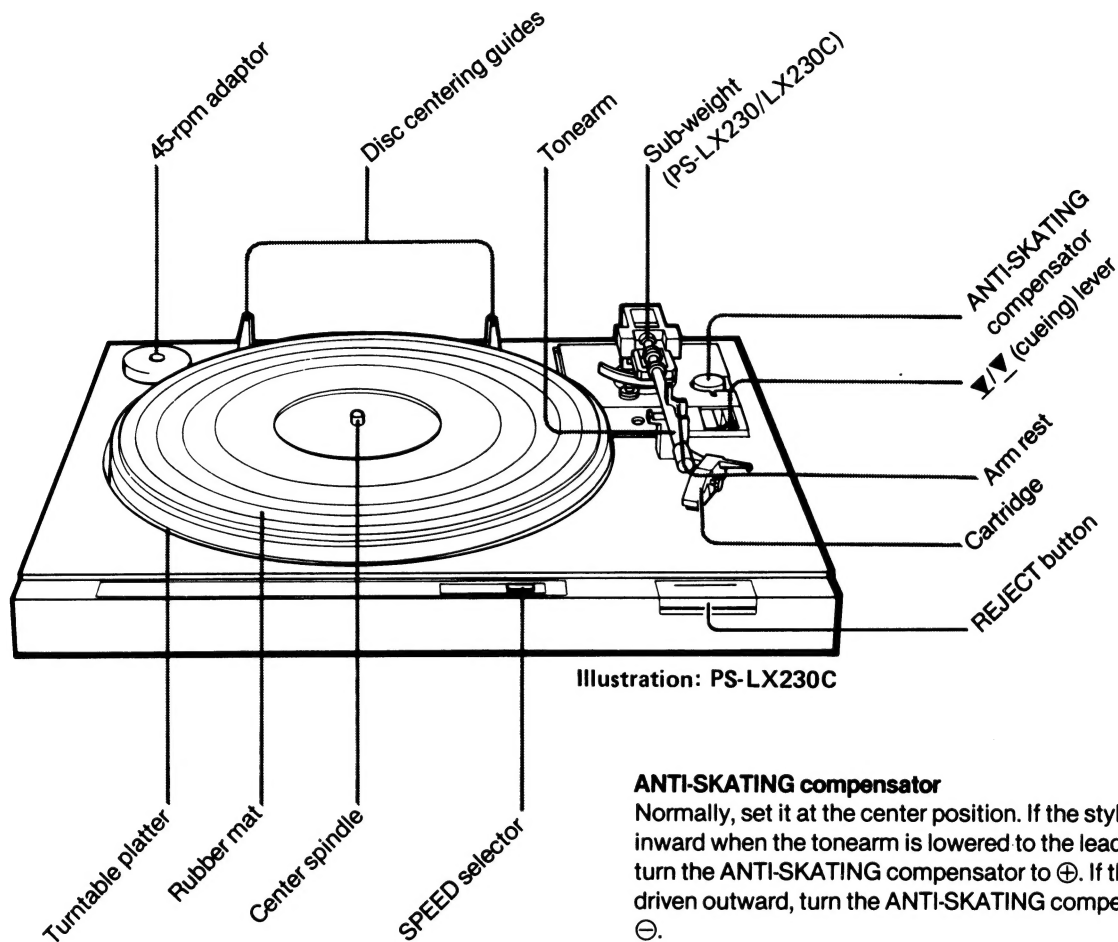


Fig. A. Using an AC voltmeter to check AC leakage.

## FUNCTION OF CONTROLS

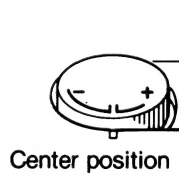
PS-LX230/LX230C

The **T4P** label indicates that a cartridge is a standardized plug-in type.



### ANTI-SKATING compensator

Normally, set it at the center position. If the stylus is driven inward when the tonearm is lowered to the lead-in groove, turn the ANTI-SKATING compensator to  $\oplus$ . If the stylus is driven outward, turn the ANTI-SKATING compensator to  $\ominus$ .



### TRACKING FORCE FINE ADJUSTMENT (PS-LX230/LX230C)

Tracking force is a vertical force applied to the stylus tip so that it can accurately trace a record groove.

In this turntable system, the correct tracking force is obtained when the sub-weight is at the  $\bullet$  position. The sub-weight must be adjusted if the following irregularity is noticed.

If the stylus skips the grooves, set the sub-weight towards  $+$ .

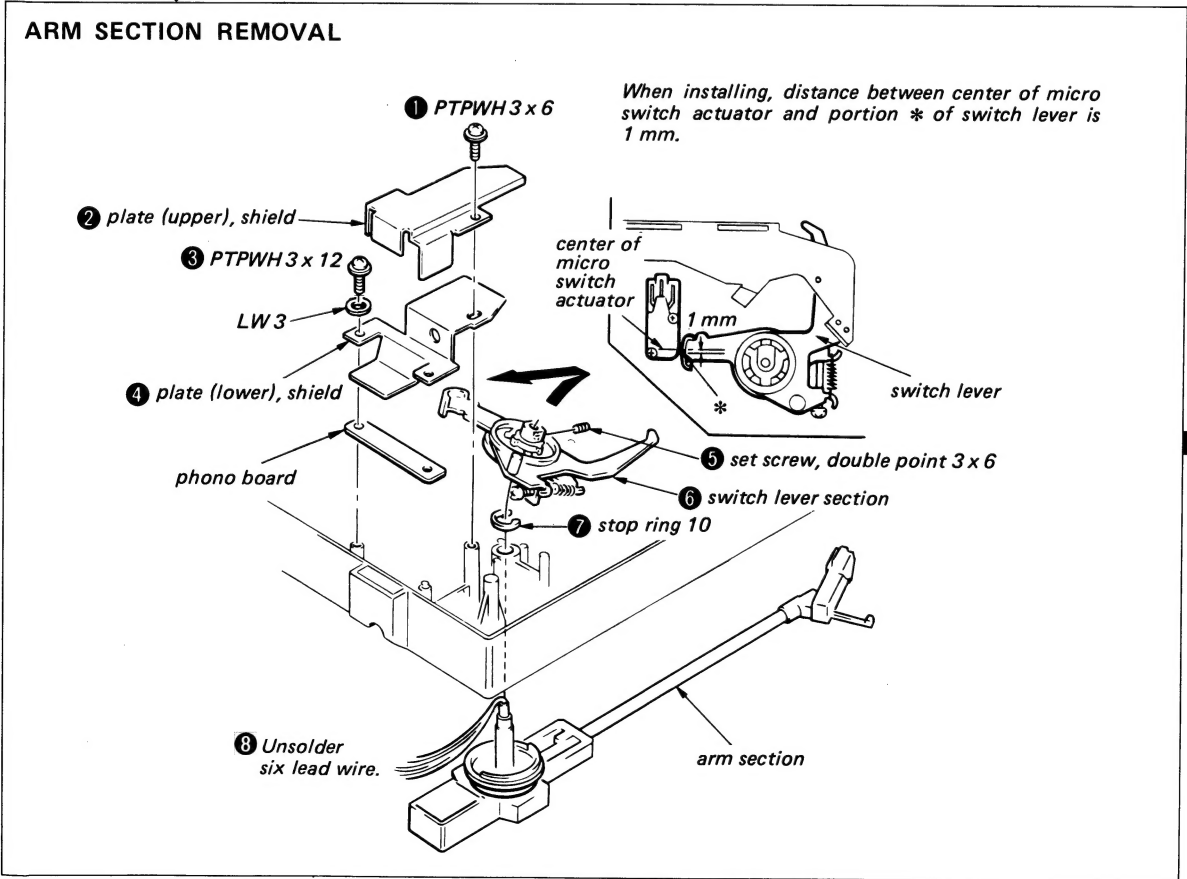
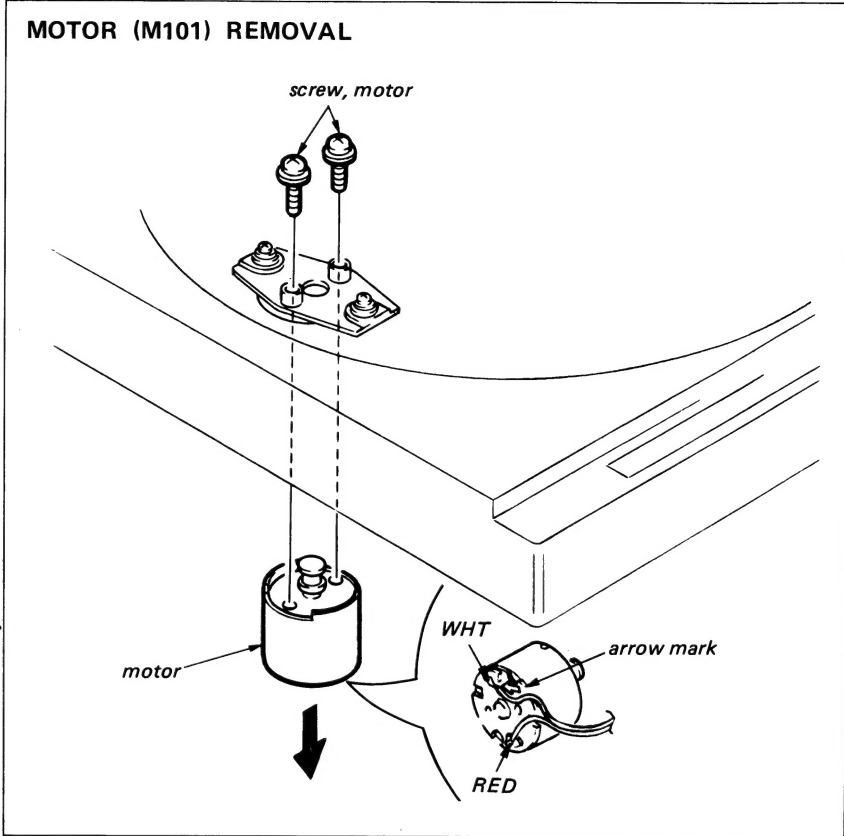
If the tracking force is too heavy, set the sub-weight towards  $-$ .

SECTION 1  
DISASSEMBLY

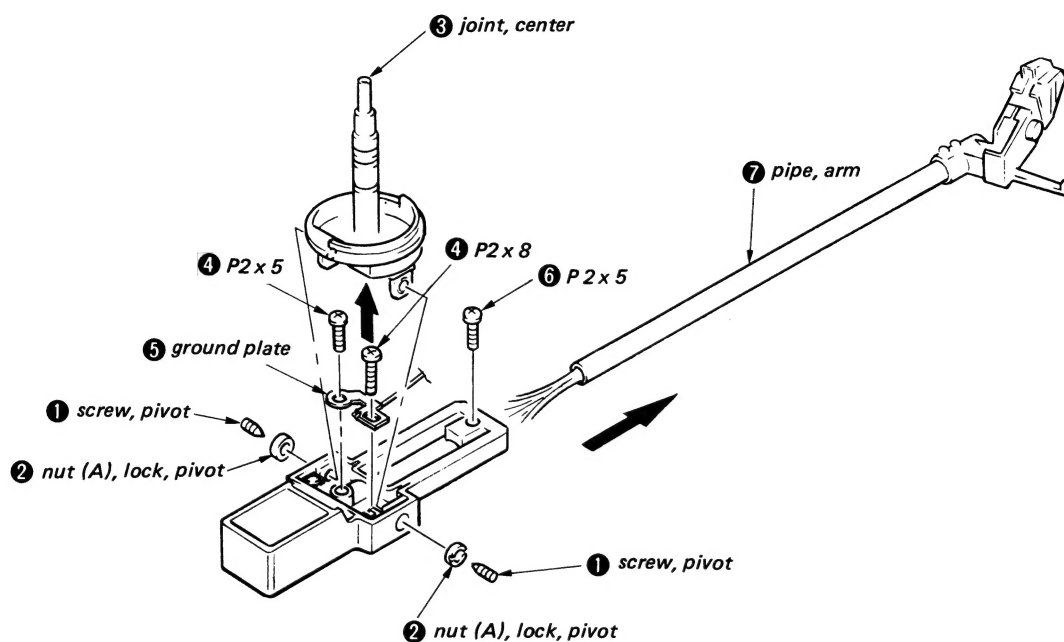
**Note:** Follow the disassembly procedure in the numerical order given.

Remove dust cover and turntable.

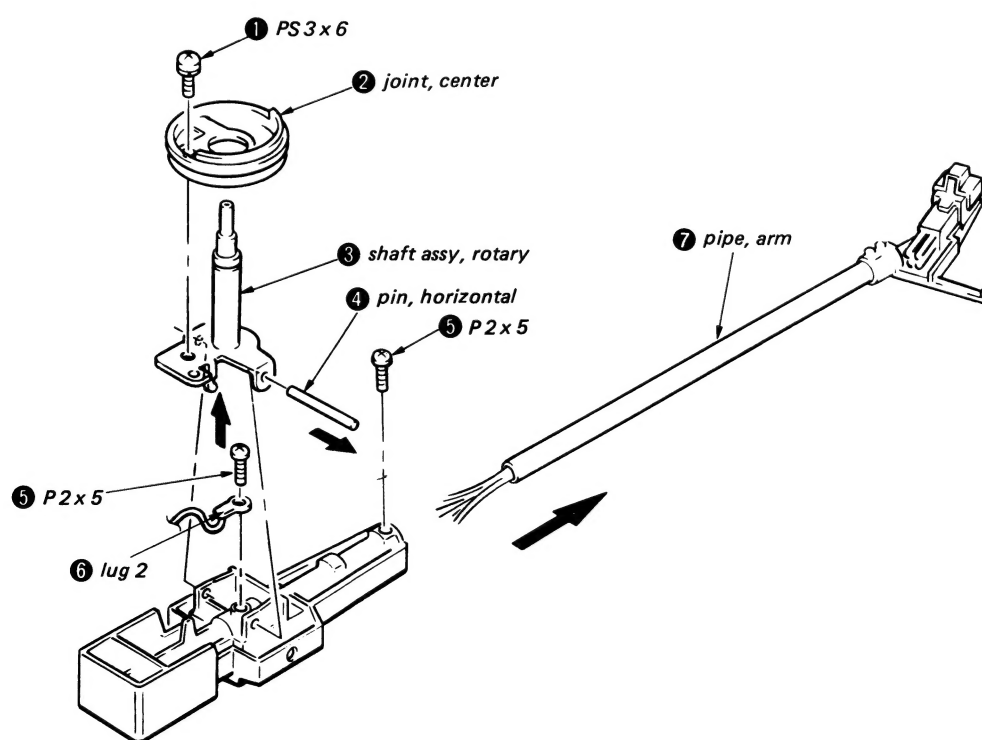
**BOTTOM PLATE REMOVAL**  
Remove 7 screws (PTPWH 3 x 12)  
of bottom.



ARM PIPE REMOVAL (FOR PS-LX230/LX230C)

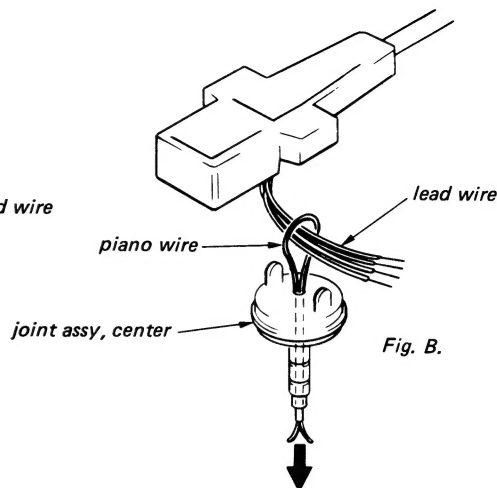
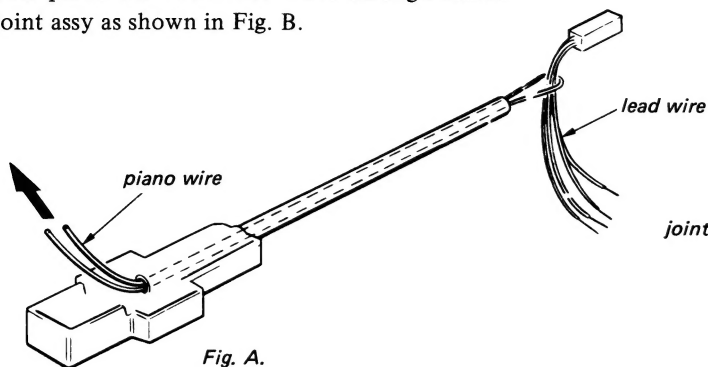


ARM PIPE REMOVAL (FOR PS-LX231)



## LEAD WIRE INSTALLATION

1. Pass piano wire with lead wires through pipe as shown in Fig. A.
2. Pass piano wire with lead wires through center joint assy as shown in Fig. B.



## SECTION 2 ADJUSTMENTS

### Speed Adjustment

**Note:** Be sure to perform 45 rpm adjustment before 33 rpm.

#### — Using a stroboscope board —

1. Put a stroboscope board on the mat.
2. Set the SPEED switch to 45.  
Depress the lifter knob to make a lift-up mode and move the arm on most outer-groove of a record.  
Adjust RV102 so that the stripped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 33.  
Adjust RV101 in the same way.

#### — Using a test record —

1. Put a test record (YFSC-16) on the mat.
2. Move the arm on a-2 (3 kHz) section and trace it.
3. Adjust RV102 so that the frequency is 4038 – 4062 Hz.
4. Set the SPEED switch to 33.  
Adjust RV101 so that the frequency is 2991 – 3009 Hz.

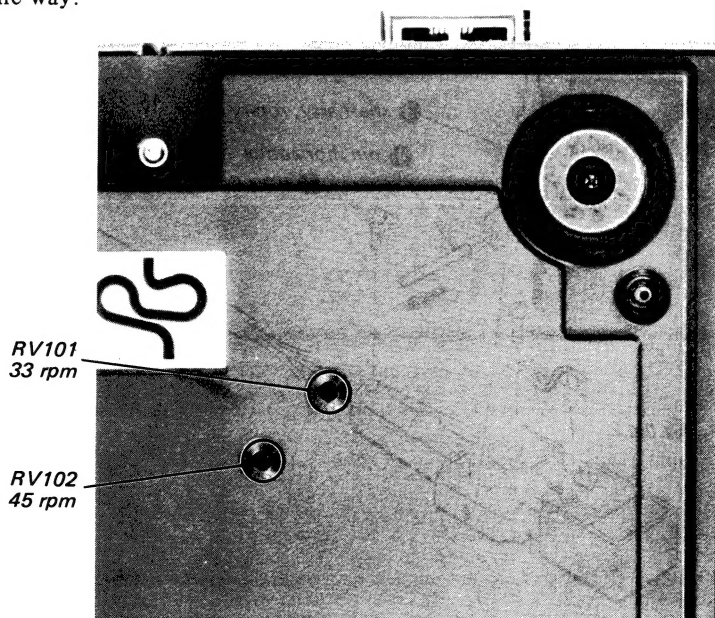
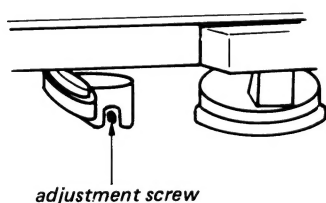
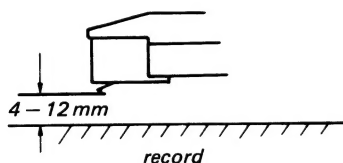


photo:  
AEP model

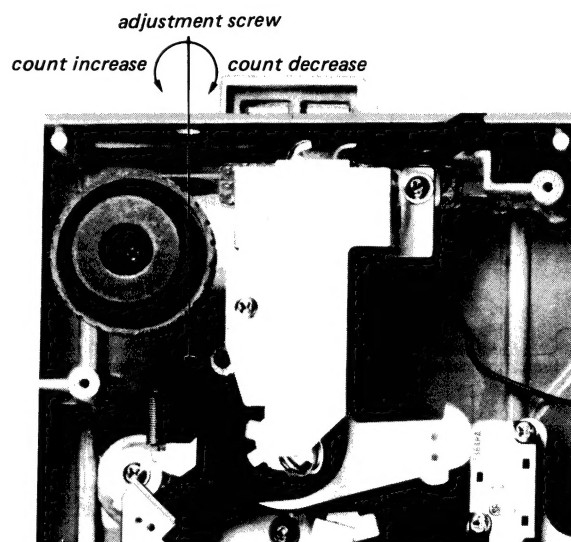
**Stylus Height Adjustment**

1. Put a test record (YFSC-16) or a record on the mat.
2. Depress the lifter knob to make a lifter-up mode and move the arm on most outer-groove of a record. Confirm that the stylus height from a record is within specification. If not, turn the adjustment screw.
3. Move the arm on most inner-groove of a record and confirm that the stylus height from a record is within specification. If not, turn the adjustment screw and repeat steps 2 and 3.

**Specification:** 4 – 12 mm ( $\frac{3}{16}$  –  $\frac{1}{2}$  inch)

**Automatic Return Position Adjustment**

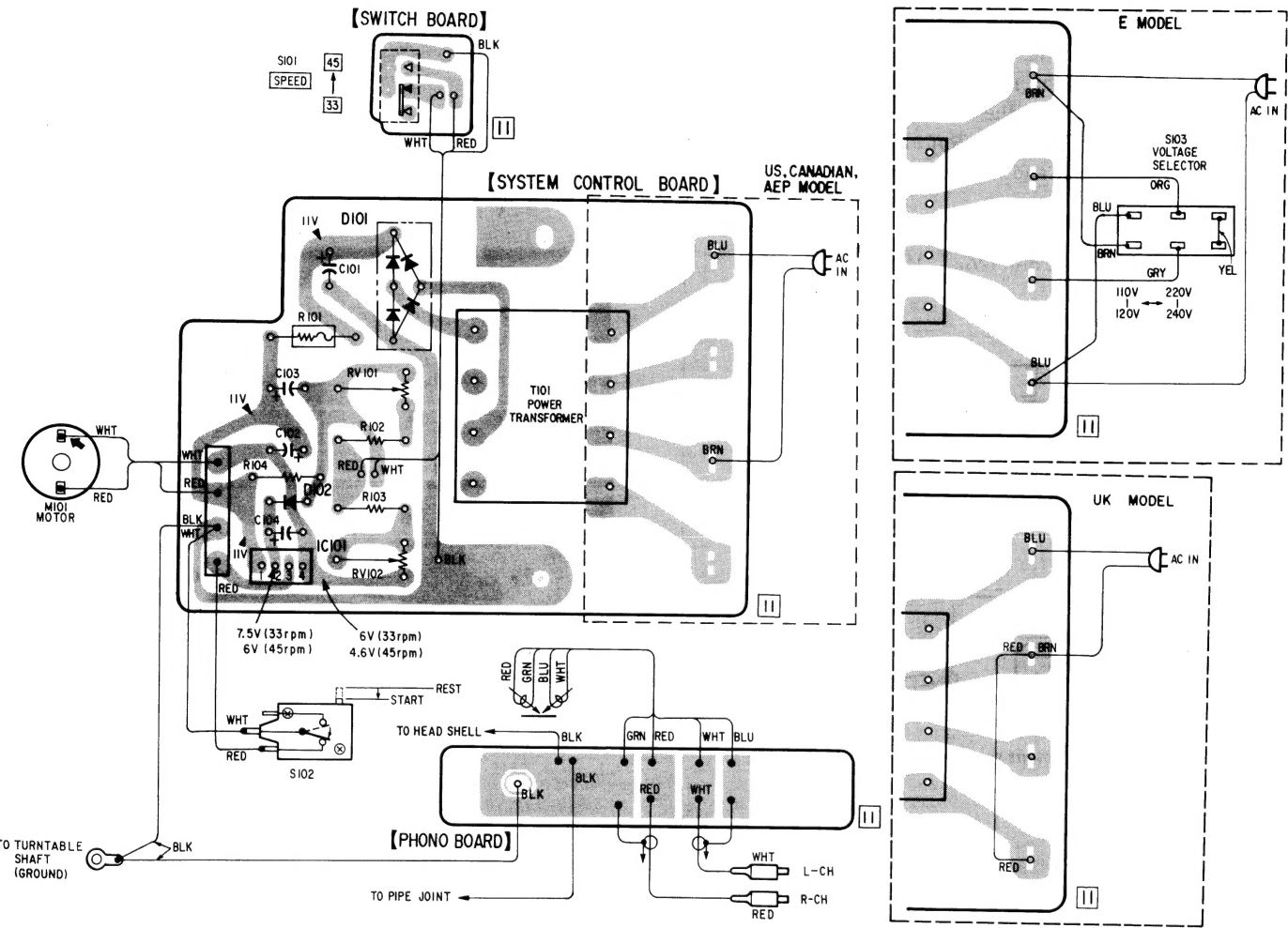
1. Put a test record (YFSC-16) on the mat.
2. Set the SPEED switch to 33 and move the tonearm on a return check groove.
3. Turn the adjustment screw so that the tonearm starts to return at count of 4 – 10.



SECTION 3  
DIAGRAMS

1 2 3 4 5 6 7 8

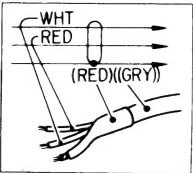
3-1. MOUNTING DIAGRAM  
— Conductor Side —



● Semiconductor Lead Layouts

$\mu$ PC1470H	1SS202-1	S1RBA10

Note:  
● Color code of sleeving over the end of the jacket.

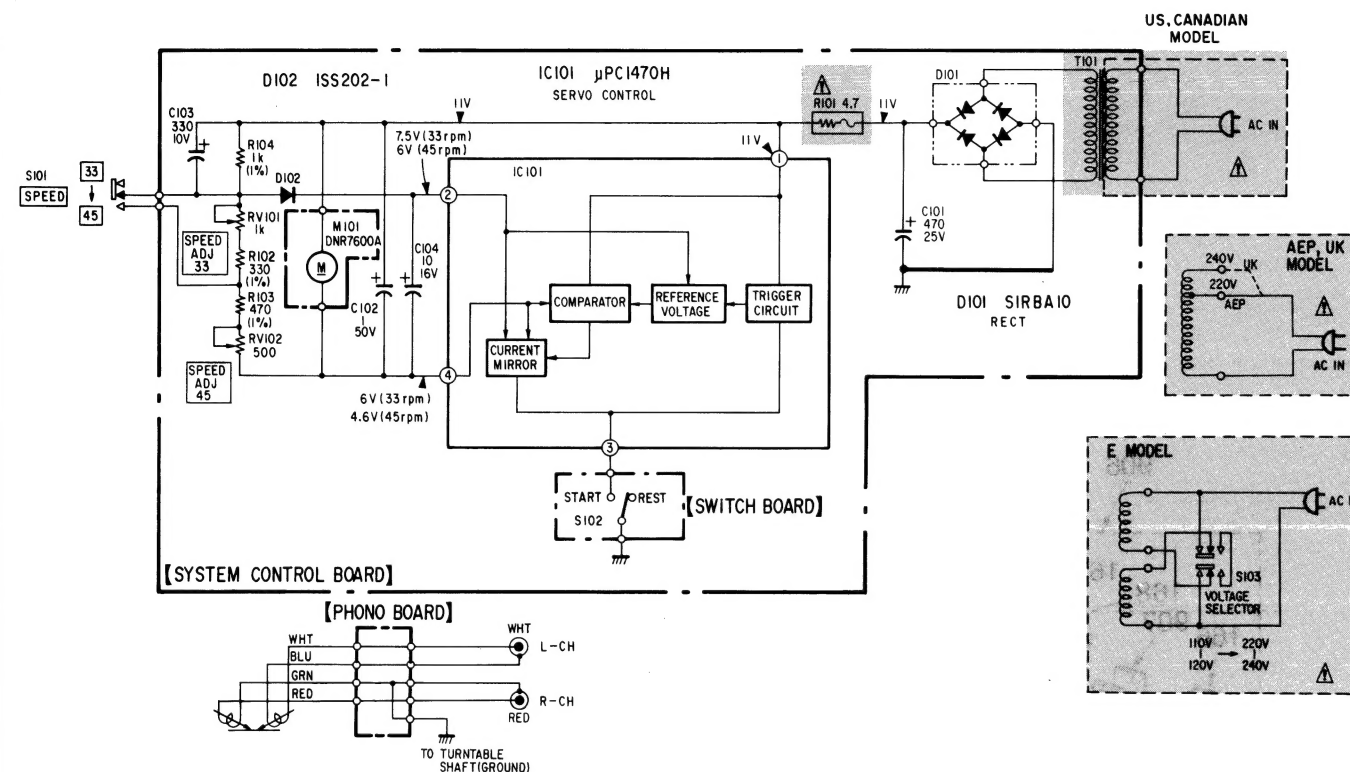




## SECTION 4

## EXPLODED VIEWS AND PARTS LIST

## 3-2. SCHEMATIC DIAGRAM



## Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\square$ : fusible resistor.
- (1%): tolerance identification.
- $\square$ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 k $\Omega$ /V).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

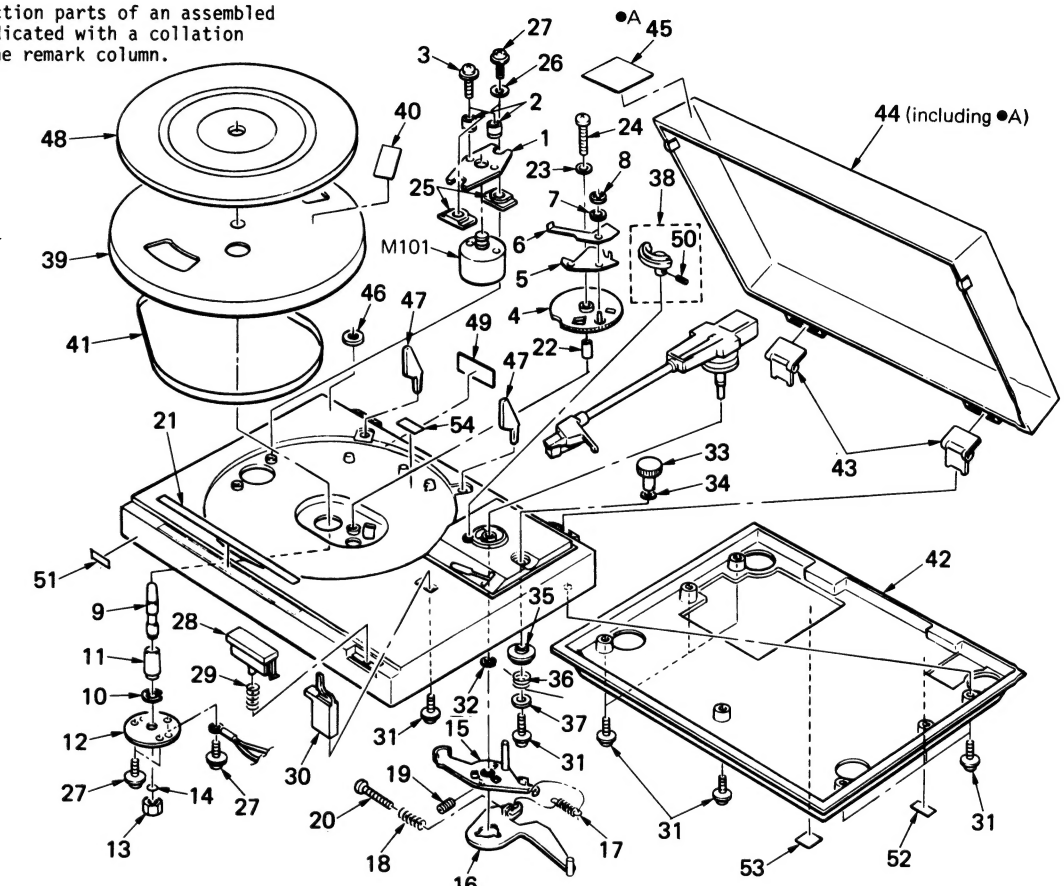
## NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

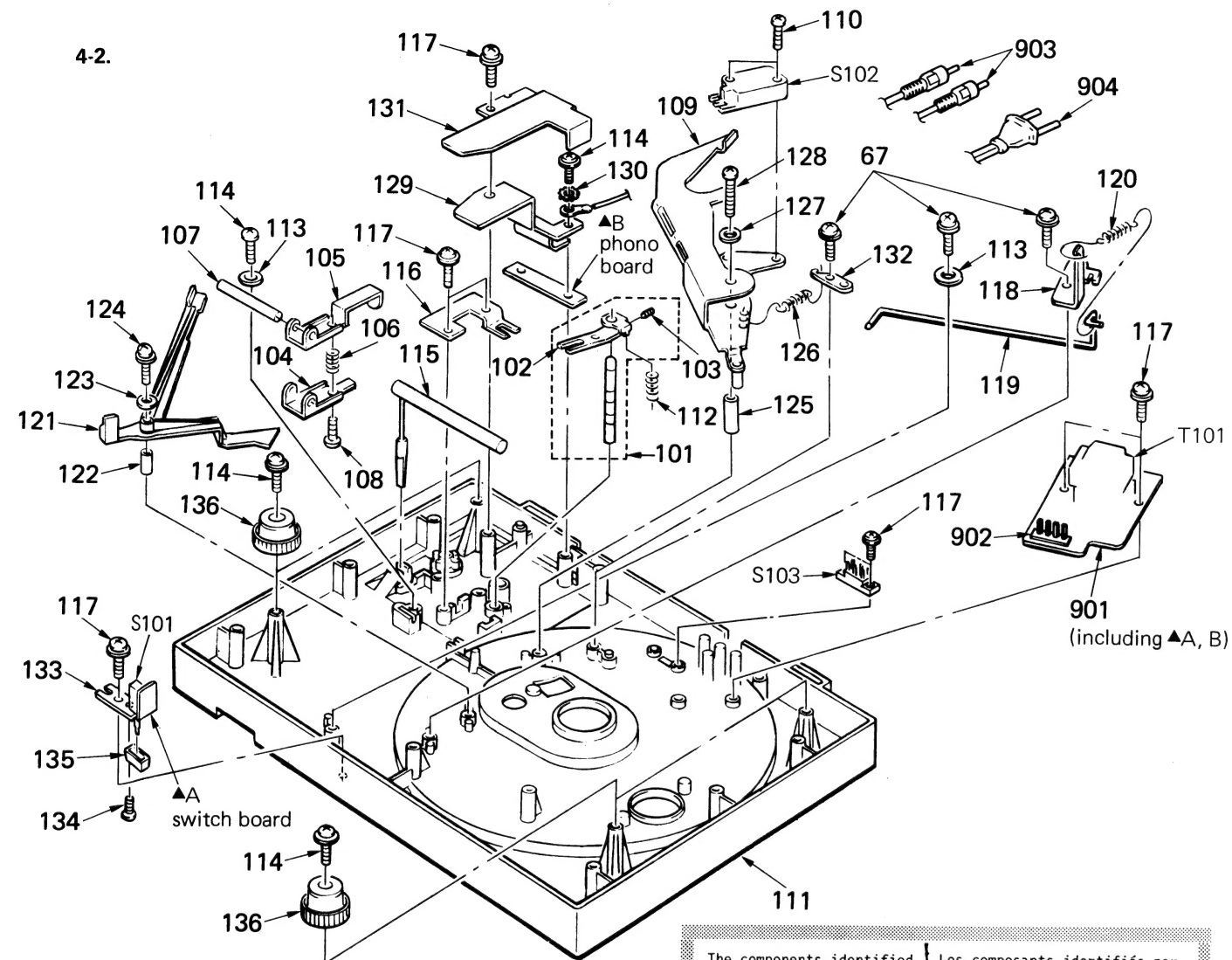
The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 4-1.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	*4-908-151-01	BRACKET (C), MOTOR		30	4-875-208-31	REST, ARM	
2	4-909-061-01	CUSHION, MOTOR		31	3-703-136-00	SCREW +PTWH 3X12	
3	4-909-062-01	SCREW, MOTOR		32	7-624-133-54	STOP RING 10, TYPE-CE	
4	4-903-339-01	GEAR, DRIVE		33	4-881-633-00	(LX231).....KNOB (I), IFC	
5	X-4852-007-2	CLUTCH (B) ASSY		34	4-903-333-01	(LX230/LX230C).....KNOB, IFC	
6	4-852-013-05	CLUTCH (A)		35	4-844-041-00	WASHER, (N)	
7	7-688-003-11	W 3, MIDDLE		36	4-903-323-01	CAM, IFC	
8	7-624-190-81	STOP RING 2, TYPE-CS		37	4-874-250-00	SPRING	
9	4-889-523-01	SHAFT, CENTER		38	0-056-028-00	WASHER, PLAIN, 14 DIA.	
10	7-624-133-34	STOP RING 8, TYPE-CE		39	X-4903-302-1	PLATE ASSY, UP AND DOWN	50
11	4-908-102-01	BEARING		40	*X-4903-416-1	TURNTABLE ASSY	
12	4-908-101-01	HOLDER, BEARING		41	4-858-264-21	LABEL, CAUTION	
13	4-908-104-01	NUT, BEARING		42	4-880-655-01	BELT	
14	4-908-141-01	RETAINER (S), THRUST		43	4-889-532-01	(US,Canadian).....PLATE, BOTTOM	
15	4-875-214-00	LEVER, SWITCH		44	4-889-532-11	(US,Canadian).....PLATE, BOTTOM	
16	*4-858-234-00	LEVER, RETURN		45	4-857-653-00	HINGE, DUST COVER	45
17	3-536-780-00	SPRING, TENSION		46	X-4903-415-1	COVER ASSY, DUST	
18	4-836-836-00	SPRING, COMPRESSION		47	3-703-705-41	STICKER, SONY SYMBOL (30)	
19	3-701-508-00	SET SCREW, DOUBLE POINT 3X6		48	3-701-806-00	ADAPTOR, 45, (E)	
20	7-682-553-09	SCREW +B 3X20		49	4-874-262-00	GUIDE, RECORD	
21	4-889-525-31	(LX231).....PANEL, CONTROL		50	4-913-521-01	(Canadian,AEP,UK,E).....SHEET, TURNTABLE	
22	4-889-525-41	(LX230/LX230C).....PANEL, CONTROL		51	4-913-521-11	(US).....SHEET, TURNTABLE	
23	4-861-933-00	SLEEVE (D)		52	4-903-462-01	(UK).....LABEL, MODEL NUMBER	
24	4-812-554-00	WASHER		53	*4-903-463-01	(AEP).....LABEL, MODEL NUMBER	
25	7-685-152-14	SCREW +P 3X25 TYPE2 SLIT		54	*4-903-464-01	(US,Canadian).....LABEL, MODEL NUMBER	
26	4-908-120-01	RUBBER, FLOATING		55	*4-903-473-01	(E).....LABEL, MODEL NUMBER	
27	*4-301-647-00	WASHER, SPECIAL		56	7-621-738-08	SET-SCT, HEX. 2.6X4, FLAT POINT	
28	3-703-137-00	SCREW +PTWH 3X10		57	3-701-690-00	(UK).....LABEL (MADE IN JAPAN)	
29	4-881-608-21	KNOB, REJECT		58	3-703-845-01	(US,Canadian,UK).....LABEL, MAIN CAUTION	
	3-533-014-00	SPRING, COMPRESSION		59	4-876-344-00	(AEP).....LABEL, CAUTION, POWER CORD	
				60	*4-881-683-00	(E).....LABEL, VOLTAGE	
				61	8-835-126-01	MOTOR, DC (DNR-7600A)	



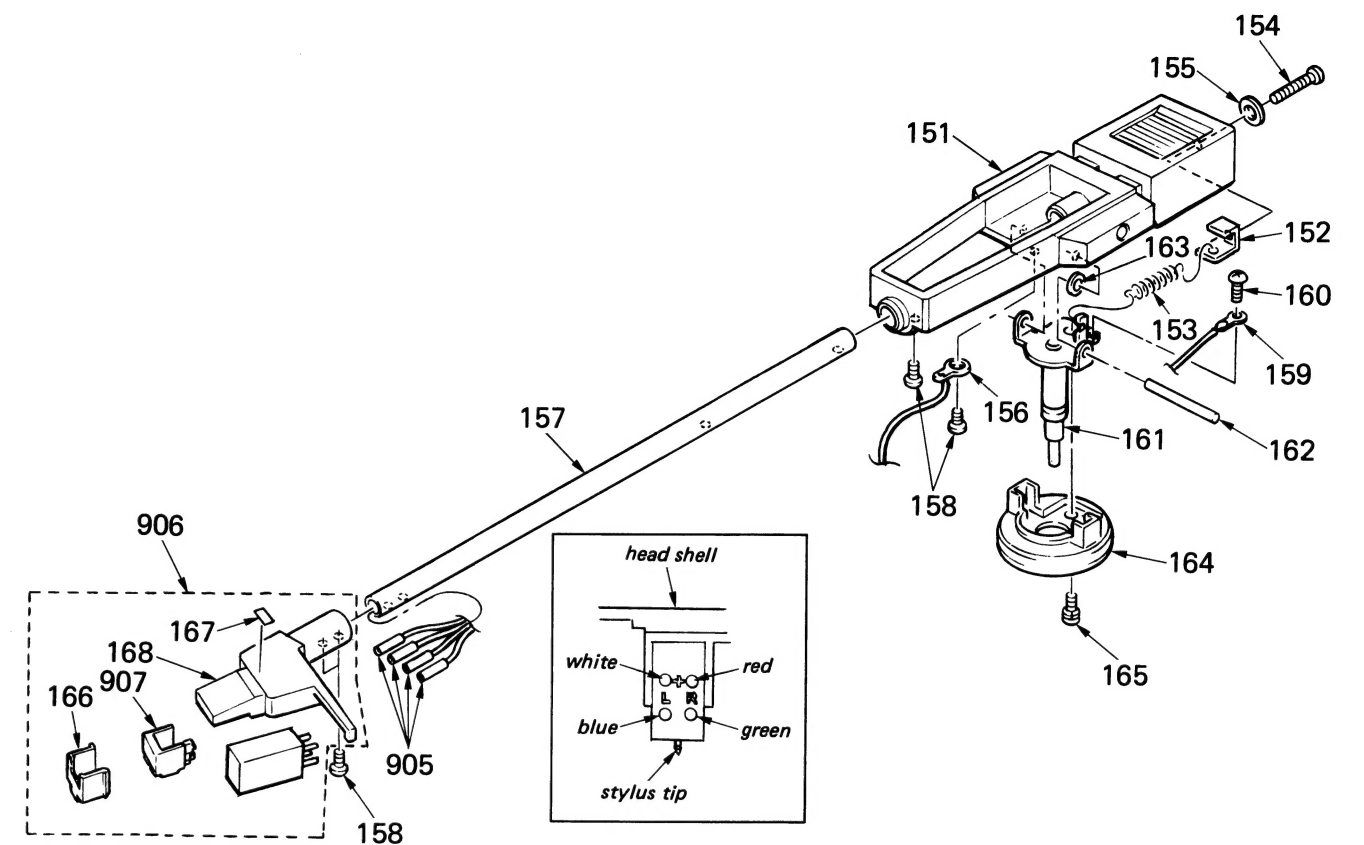
The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	A-4637-063-A	ROD ASSY (P), PUSH	102,103	124	7-685-152-14	SCREW +P 3X25 TYPE2 SLIT	
102	*4-876-317-00	GUIDE, LIFTER		125	4-875-207-00	SLEEVE	
103	7-621-741-09	SET-SCT, HEX. 2.6X8 WP		126	4-870-785-00	SPRING, TENSION (MAIN LEVER)	
104	*4-903-321-01	LEVER (G), LIFTER		127	3-610-931-11	SPACER, SHAFT, DRUM, HEAD	
105	*4-903-317-01	LEVER (F), LIFTER		128	7-685-666-21	SCREW +BVTP 4X30 TYPE2 SLIT	
106	4-881-642-00	SPRING, COMPRESSION		129	*4-889-524-01	PLATE (LOWER), SHIELD	
107	*4-881-611-00	SHAFT, LEVER, LIFTER		130	7-623-422-07	LW 3, TYPE B	
108	7-621-775-50	SCREW +B 2.6X10		131	*4-889-526-01	PLATE (UPPER), SHIELD	
109	*X-4877-805-6	LEVER ASSY, MAIN		132	*4-870-752-00	HOLDER, SPRING	
110	7-682-150-01	SCREW +P 3X12		133	*4-889-527-01	BRACKET, SWITCH	
111	4-889-531-41	FRAME		134	7-621-775-08	SCREW +B 2.6X3	
112	4-903-331-01	SPRING (LIFTER), COMPRESSION		135	4-870-730-21	KNOB, SPEED	
113	*4-301-647-00	WASHER, SPECIAL		136	X-4903-301-1	INSULATOR ASSY	
114	3-703-136-00	SCREW +PTPHW 3X12		901	*1-614-795-11	PC BOARD, SYSTEM CONTROL	
115	4-877-824-00	CAM, LIFTER		902	*1-535-117-00	TERMINAL	
116	*4-903-320-01	RETAINER (D), LIFTER		903	1-551-294-00	CORD (WITH PLUG)	
117	3-703-137-00	SCREW +PTPHW 3X10		904	△1-534-817-XX	(AEP).....CORD, POWER, EURO PLUG	
118	*4-875-205-00	PLATE, FIXED			△1-551-628-00	(US,Canadian)....CORD, POWER	
119	4-875-204-00	SPRING			△1-556-562-00	(UK).....CORD, POWER	
120	3-491-240-00	SPRING, TENSION			△1-551-188-XX	(E).....CORD, POWER	
121	*4-858-240-00	LEVER (M), CLUTCH		S101	1-570-166-11	SWITCH, PUSH (1 KEY)	
122	4-861-933-00	SLEEVE (D)		S102	1-570-489-11	SWITCH, MICRO	
123	4-812-554-00	WASHER		S103	△1-552-535-00	(E)....SWITCH, VOLTAGE SELECTOR	
				T101	△1-448-043-11	(US,Canadian)....TRANSFORMER, POWER	
				T101	△1-448-044-11	(AEP,UK).....TRANSFORMER, POWER	
				T101	△1-448-045-11	(E).....TRANSFORMER, POWER	

4-3.

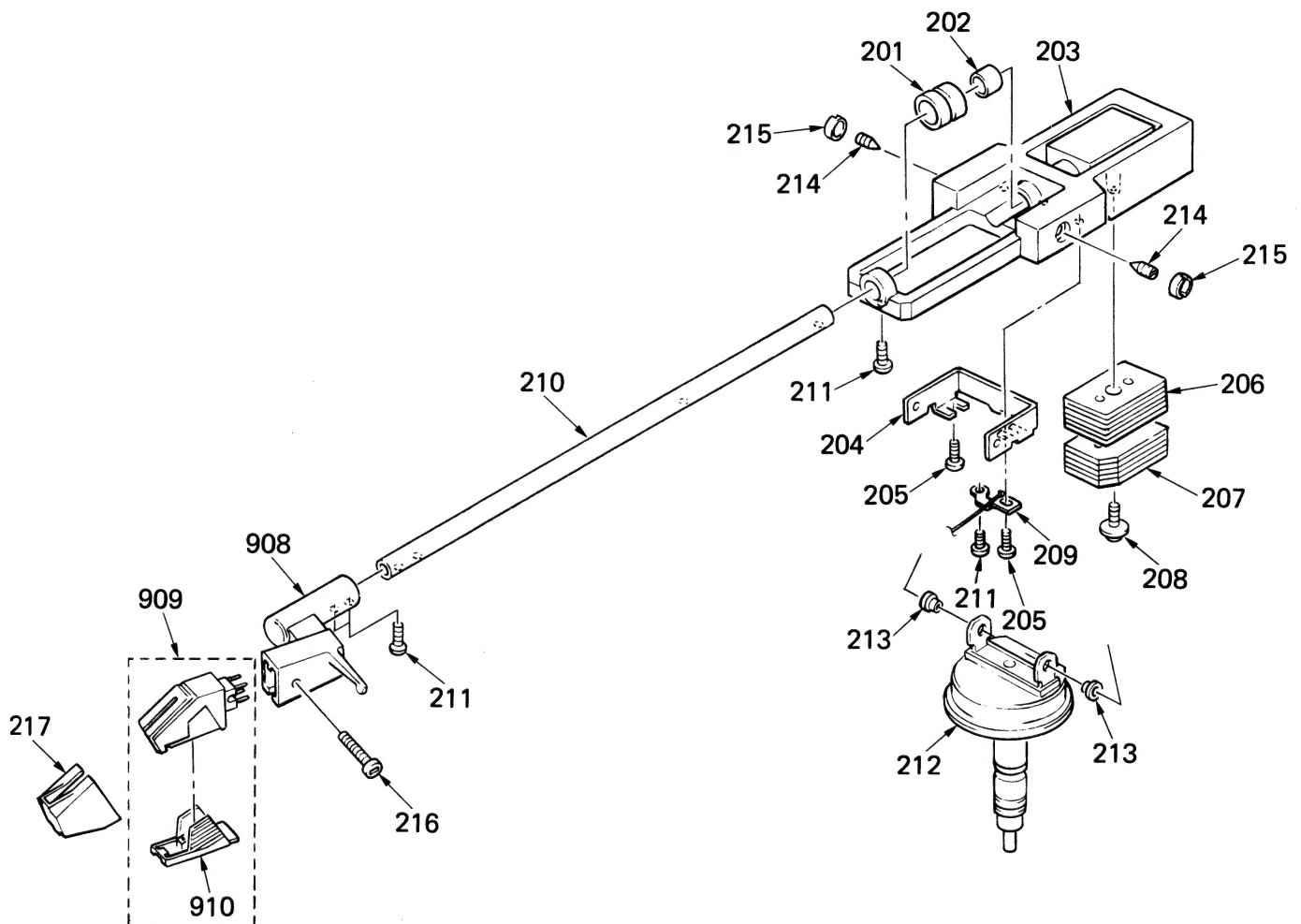
FOR PS-LX231



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-889-529-11	JOINT, PIPE		164	4-880-631-11	JOINT, CENTER	
152	4-868-016-00	HOOK, SPRING		165	7-682-647-09	SCREW +PS 3X6	
153	4-889-510-00	SPRING, TENSION		166	3-706-613-00	PROTECTOR	
154	7-682-555-09	SCREW +B 3X30		167	*3-706-612-00	LABEL, CARTRIDGE	
				168	3-706-614-11	SHELL	
155	7-688-003-11	W 3, MIDDLE		905	1-557-042-11	LEAD (WITH TERMINAL) RED	
156	7-623-505-01	LUG, 2			1-557-042-21	LEAD (WITH TERMINAL) GREEN	
157	4-889-528-11	PIPE, ARM			1-557-042-31	LEAD (WITH TERMINAL) BLUE	
158	7-621-771-06	SCREW +B 2X5			1-557-042-41	LEAD (WITH TERMINAL) WHITE	
159	7-623-508-01	LUG, 3		906	1-549-109-21	CARTRIDGE(WITH SHELL)(VL-42G)B	
160	7-682-545-09	SCREW +B 3X4		907	1-549-112-00	STYLUS (ND-142G)	
161	X-4881-605-1	SHAFT ASSY, ROTARY					
162	4-880-619-00	PIN, HORIZONTAL					
163	3-701-437-01	WASHER					

4-4.

FOR PS-LX230/LX230C



No.	Part No.	Description	Remarks
201	*4-903-312-11	WEIGHT, SUB	
202	*4-903-308-01	SHEET (S)	
203	4-903-336-11	JOINT, PIPE	
204	*4-881-628-00	REINFORCEMENT (A)	
205	7-685-105-29	SCREW +P 2X8 TYPE2 SLIT	
206	4-877-810-00	WEIGHT	
207	*4-903-350-01	WEIGHT, SUPPORT	
208	7-685-134-14	SCREW +P 2.6X8, TYPE2 NON-SLIT	
209	*4-889-539-01	PLATE, GROUND	
210	4-903-307-11	PIPE, ARM	

No.	Part No.	Description	Remarks
211	7-621-771-06	SCREW +B 2X5	
212	X-4881-604-6	JOINT ASSY, CENTER	
213	4-881-618-00	BEARING, PIVOT	
214	2-203-518-61	SCREW, PIVOT	
215	2-203-519-00	NUT (A), LOCK, PIVOT	
216	4-887-481-01	(LX230C)...SCREW (B), CARTRIDGE FITTING	
217	4-903-347-00	(LX230C)...PROTECTOR	
908	*1-562-517-41	CONNECTOR (WITH HEAD SHELL) 4P	
909	1-549-117-21	(LX230C)...CARTRIDGE (VL-45G)(B)	910
910	1-549-118-00	(LX230C)...STYLUS (ND-145G)	

## SECTION 5

### ELECTRICAL PARTS LIST

NOTE:

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable


COILS


MMH : mH, UH : μH

SEMICONDUCTORS










In each case, U : μ, for example:

UA...: μA..., UPA...: μPA..., UPC...: μPC,  
UPD...: μPD...


The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

#### ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*1-614-795-11	PC BOARD, SYSTEM CONTROL
902	*1-535-117-00	TERMINAL
903	1-551-294-00	CORD (WITH PLUG)
904	 1-534-817-XX	(AEP)...CORD, POWER, EURO PLUG
	 1-551-628-00	(US,Canadian)...CORD, POWER
	 1-556-562-00	(UK)...CORD, POWER
	 1-551-188-XX	(E)...CORD, POWER
905	1-557-042-11	(LX231)...LEAD (WITH TERMINAL) RED
	1-557-042-21	(LX231)...LEAD (WITH TERMINAL) GREEN
	1-557-042-31	(LX231)...LEAD (WITH TERMINAL) BLUE
	1-557-042-41	(LX231)...LEAD (WITH TERMINAL) WHITE
906	1-549-109-21	(LX231)...CARTRIDGE (WITH SHELL) (VL-42G) B
907	1-549-112-00	(LX231)...STYLUS (ND-142G)
908	*1-562-517-41	(LX230,LX230C)...CONNECTOR (WITH HEAD SHELL) 4P
909	1-549-117-21	(LX230C)...CARTRIDGE (VL-45G) (B)
910	1-549-118-00	(LX230C)...STYLUS (ND-145G)
C101	1-123-336-00	ELECT 470MF 20% 25V
C102	1-123-380-00	ELECT 1MF 20% 100V
C103	1-123-309-00	ELECT 330MF 20% 10V
C104	1-123-356-00	ELECT 10MF 20% 50V
D101	8-719-510-01	DIODE 1SRBA10
D102	8-719-107-94	DIODE 1SS202-1
IC101	8-759-103-35	IC UPC1470H
M101	8-835-126-01	MOTOR, DC (DNR-7600A)
R101	 1-217-383-00	FUSIBLE 4.7 5% 1/4W F
R102	1-214-717-00	METAL 330 1% 1/4W
R103	1-214-721-00	METAL 470 1% 1/4W
R104	1-214-729-00	METAL 1K 1% 1/4W
RV101	1-226-233-00	RES, ADJ, CARBON 1K
RV102	1-226-232-00	RES, ADJ, CARBON 500
S101	1-570-166-11	SWITCH, PUSH (1 KEY)
S102	1-570-489-11	SWITCH, MICRO
S103	 1-552-535-00	(E)...SWITCH, VOLTAGE SELECTOR
T101	 1-448-043-11	(US,Canadian)...TRANSFORMER, POWER
T101	 1-448-044-11	(AEP,UK)...TRANSFORMER, POWER
T101	 1-448-045-11	(E)...TRANSFORMER, POWER

#### ACCESSORY & PACKING MATERIAL

Part No.	Description
 1-526-565-00	(E)...AC PLUG ADAPTOR
3-701-616-00	(LX230)...BAG, POLYETHYLENE (FOR SCREW)
3-701-630-00	BAG, POLYETHYLENE (FOR INSTRUCTION MANUAL)
3-701-634-00	BAG, POLYETHYLENE (FOR TURNTABLE)
3-701-806-00	ADAPTOR, 45, (E)
3-703-450-01	(US)...INSTRUCTION (FOR SAFETY CAUTION)
3-765-234-11	(UK,E)...MANUAL, INSTRUCTION
3-765-234-11}	(AEP)...MANUAL, INSTRUCTION
3-765-234-41}	
3-765-234-21	(US)...MANUAL, INSTRUCTION
3-765-234-21}	(Canadian)...MANUAL, INSTRUCTION
3-765-234-31}	
3-794-123-11	LABEL, CAUTION (FOR DRIVE GEAR)
3-795-753-21	(LX230)...INSTRUCTION (FOR SCREW)
4-874-262-00	GUIDE, RECORD
4-876-352-00	SHEET, PROTECTION (FOR SET)
4-881-698-00	PLATE, PROTECTION (FOR FRAME SIDE)
4-887-481-01	(LX230)...SCREW (B), CARTRIDGE FITTING
4-889-536-01	CUSHION (LEFT)
4-889-537-01	CUSHION (RIGHT)
4-889-538-01	HOLDER, TURNTABLE
4-903-348-01	(LX230,LX230C)...HOLDER, ARM
4-903-468-41	(LX231)...INDIVIDUAL CARTON
4-903-468-51	(LX230)...INDIVIDUAL CARTON
4-903-468-61	(LX230C)...INDIVIDUAL CARTON
4-913-521-01	(Canadian,AEP,UK,E)...SHEET, TURNTABLE
4-913-521-11	(US)...SHEET, TURNTABLE
*X-4903-416-1	TURNTABLE ASSY